Draft Total Maximum Daily Loads for Anacostia River and Tributaries:
Fecal Coliform
RESPONSE TO COMMENTS

EPA - Letter Dated March 24, 2003

The TMDLs are designed to implement the applicable water quality standards.

To complete the citiation "49 D.C. REG. 3012 and 49 D.C. REG 4854" has been added.

The TMDLs include a total allowable load as well as individual wasteload allocations and load allocations.

In the District of Columbia storm sewer are covered under an NPDES permit. According to the EPA clarification memoranda dated November 22, 2002, storm sewers are to be included as categorical waste load allocation. Storm water sources have not been quantified as distinguished from direct runoff, tributary stream flow and other extraneous flow to be included under categorical waste load as noted in the EPA memoranda. Using an area ratio as suggested will not provide an accurate allocation. The differentiation between a storm sewer and a stream conveyance pipe is not feasible at this time.

The TMDLs consider the impact of background pollutant contributions.

Forty seven percent (47%) of Watts Branch lies in the District of Columbia, the remaining is in Maryland. The two loads are shown separately in the draft TMDL. Approximately two thirds of Nash Run is in the District of Columbia. The correction has been made to show the breakdown.

There is reasonable assurance that the TMDLs can be met.

The implementation section describes the activities, planed and underway, to reduce bacteria load to the Anacostia and its tributaries.

Technical Issues.

Computer Modeling: An explanation of the various files necessary to run the model was given to the EPA

Scenario Runs: the scenario runs were further examined. It is to be noted that additional reductions than that proposed in the draft TMDL can be achieved by the Combined Sewer Overflow Long Term Control Plan. The new allocation for the TMDL is 95 percent reduction for an average year.

Existing Load Table: All load tables are based on three representative years. Average has been included.

Representative Period: the text has changed to read “period of analysis”, the representative years, 1989 to 1990.

Table - Number of Days Exceeding 400 MPN: the Table has been corrected.

Tributary description (a-f): the tributary description is based on available information collected for this TMDL.

Sanitary Sewer Overflows (SSOs): Information on SSOs is not available and it is not clear that there are any.

Pathogen Reduction: Regional goals for the reduction of pathogens exist under various federal and state programs. One such regional effort is under the drinking water source protection. The effort is not explicitly and directly to the Anacostia River or its tributaries.

Monitoring: Monitoring is augmented by the simulation models.

Earthjustice (Letter dated March 31, 2003)

(Attached Memoranda from Jack Douglas Smith to Howard Fox, March 30, 2003)

1. Model documentation is not included in the TMDL.

Development of the TAM/WASP model has been the subject of the regular DC TMDL public meetings. The technical documentations are voluminous and not included in the TMDL report.

2. The TMDL contains errors in area and annual fecal coliform load from separate storm sewers and tributaries.

The area covered by separate storm sewers discharging to the Anacostia River is larger that the sum of the area covered by those tributaries addressed in the TMDL report (those listed for bacteria impairment). This fact is the main reason for what appears to be an inconsistency.
In addition, the following contribute to the apparent inconsistencies and uncertainities:
- Several of the original streams have been partially sewered, some at the head waters, some mid way, and others for some distance from their confluence with the Anacostia River.
- Completely sewered streams may exist, as evidenced by recent observation of dry weather flow from storm drains.
- For a tributary, for example, the watershed area as delineated by the topography may not be the same as the area served by the separate storm sewer system (or 'storm watershed').

3. All measures of environmental data that represent more than a single sample are expressions of statistical estimates of a most probable number.

Correct.

4. Storm water discharges are presented in the TMDL as nonpoint source discharges. Separate storm sewer discharges should be considered as point source.

Because of the uncertainties indicated under item 2. above, and pending field verification of the individual sources, storm water are considered nonpoint source.

5. There is no margin of safety provided in the TMDL.

The additional reductions provide adequate margin of safety.

6. The TMDL presents annual allocations instead of daily allocations.

The bacteriological standard in the District of Columbia Water Quality Standards is a 30 day geometric mean of 200/100ml and 1000/100ml fecal coliform count for Class A and B, respectively. The scenario runs verify compliance with the standards. The average annual load allocation contained in the TMDL is for that run meeting the water quality standards.

7. Allocation for CSO and storm water discharges should be made to each individual outfall.

See items 2. and 4.

8. Source control plans cited to implement the TMDL will not achieve the level of reduction.

Ongoing and planned activities under the CSO Long Term Control Plan and storm water management program will achieve the reductions. In addition, as new information becomes available source control measures will continue to evolve. For example, the bacteria source tracking project currently underway will assist the District of Columbia to target specific sources.

9. The 30 day geometric mean does not sufficiently protect Class A uses.

In general, accepted methods for setting standards rely on the relationship between the bacteria count and the rates of the use (eg. swimming) associated health effect. The adopted count is said to reflect the acceptable risks. These are addressed in revisions of water quality standards.

10. The ambient monitoring does not include storm water and CSO monitoring.

The ambient monitoring program in the TMDL is included to supplement the storm water and CSO monitoring.

(Cover memoranda)

1. The TMDLs are inadequately explained.

Explanation has been provided (see below).

2. The TMDLs use unlawfully long averaging times.

The TMDL uses the 30 day geometric mean (see also item 6. above)

3. The TMDLs ignore Class A and Class B uses.

The TMDL was prepared for fecal coliform count of 200/100ml and 1000/100ml, Class A and B respectively.

4. DOH incorrectly claims that Class A and B uses are not existing uses.

Response deferred to the DC Water Quality Standards review process. The comment will be considered as part of the water quality standards revision.

5. As discussed by Dr. Smith, the TMDLs do not allocate to individual outfalls.

See item 7. above.

6. It is suggested that "mixing zone" provisions might excuse establishment of a TMDL that fails to achieve numerical fecal coliform criteria or protect uses.

The mixing zone provision recognizes both the temporal and spatial nature of the impact of point source discharges that do not adversely affect the waterbody as a whole. The TMDL acknowledges the varying risks associated with storm and CSO events.

7. The fecal coliform TMDL fails to implement the numerical criteria. EPA recommends single sample maximum and e coli and enterococci for pathogen indicators.

The TMDL meets the water quality standards. Response to EPA's recommendation deferred to the DC Water Quality Standards review process. The comment will be considered as part of the Water quality standard revision.

8. Sources on both sides of the D.C.-Maryland boundary contribute to water quality standard violations in the District, and both need to be controlled.

Concur.

9. The TMDL for bacteria must be consistent with a prohibition of the discharge of untreated sewage.

The TMDL for bacteria is consistent with a prohibition of the discharge of untreated sewage. CSOs contain waste water and storm water. Under wet weather conditions, the highest concentration of pollutants occurs with smaller storms or at the beginning of larger storms. The flow is referred to as the first flush. The CSO LTCP is to capture this flow to eliminate the pollutants from being discharged to the Anacostia River, 98% of the time. Partial treatment is to be provided for any overflow that may occur during the high rainfall events.

U.S Department of the Interior, Fish and Wildlife Service (letter dated March 18, 2003)

Repair and upgrade of sanitary sewers is needed on Watts Branch (page 3):

The DOH coordinates with DC Water and Sewer Authority to identify failing sanitary systems. WASA repairs the system as breaches are reported. This has been noted in the TMDL document under "Source Control Plan".

D.C Water and Sewer Authority (letter dated March 31, 2003)

Combined sewer overflow (CSO) allocation period has to be clearly defined.

It has been indicated that the computation for the annual allocation is conducted over the three year period of analysis (1988, 1989 and 1990). Therefore, the allocation is an average annual Load.

Department of the Navy (letter dated March 31, 2003)

Will DC adjust the TMDL to reflect findings of the bacteria source assessment?

When completed, the bacteria source tracking results will be used to supplement the TMDL.

More information on how the loads are calculated is needed.

The TAM/WASP model used for the computation, has been used for several Anacostia River water quality simulations. Technical documentations are voluminous.

CSO events and % reduction should be provided for Scenario 3.

Scenario 3 is the allocation run and provides much more detail under the allocation section.

Load Allocation should be changed to Waste Load Allocation (page 16)

Storm water is non-point source load.

Washington Navy Yard Low Impact Development could be mentioned.

Those projects with documented water quality impact (or potential impact) are mentioned in the report.

Discussion on how the reductions will be implemented and achieved is insufficient.

The implementation section gives a wide array of planned and ongoing activities. In particular, implementation of the CSO Long Term Control Plan, and other reduction measures for storm water will achieve the reductions.

Is DC planning to change its bacteria indicators to E. Coli?

Change for bacteria indicator is being considered under the next Water Quality Standards review.